

REMARKS

Claim 41 has been amended. Claims 41-47 remain in the application.
Further examination and reconsideration of the application, as amended, is
5 hereby requested.

In Section 4 of the Office Action, the Examiner rejected claims 41, 43, 44,
and 46 under 35 USC 102(e) as being anticipated by Muroyama et al. Applicants
respectfully traverse this rejection as Muroyama does not disclose Applicants'
10 claimed invention and also with respect to Muroyama not being a proper
reference.

The Examiner states that Muroyama discloses a cathode layer (11)
disposed on both the emitting a surface and sidewalls of the first and second
chambers. While Muroyama does not explicitly disclose the cathode layer (11)
15 "on" both the emitting surface "and the sidewalls", the Examiner is interpreting
"on" in a manner that means "close proximity with". This is an interpretation that
is outside of the scope one of ordinary skill would attribute to the word given the
contents of the specification and drawings of Applicants' invention and its
modification by the adverb "disposed". Nevertheless, to further clarify and
20 distinguish Applicants invention over the cited art and to prevent a long and costly
appeal, Applicants have amended claim 41 to clarify that the "cathode layer " is
"disposed over both the emitting surfaces and sidewalls of the first and second
chambers." Support for this amendment is found throughout the specification and
in particular page 7, line 21. Muroyama clearly discloses in Fig. 16 that the
25 cathode layer is disposed under, not over, the sidewalls of the first and second
chambers.

Further, Applicants are submitting a declaration under 37 CFR 1.131 to
swear behind the U.S. filing date of Muroyama, et al. Muroyama has a U.S. filing
date of Dec. 20, 2000. The Applicants invention disclosure on the front page
30 indicates that they built the claimed device, and thus reduced to actual practice,
on Nov. 11, 2000 which is prior to the Dec. 20, 2000 filing date of Muroyama.
Accordingly, Muroyama is not a proper reference and should be withdrawn.

Claims 43, 44, and 46 depend upon claim 41 and are believed patentable
based at least on the patentability of claim 41,as amended.

In light of the amendment made to clarify the invention and the declaration establishing an earlier invention date prior to the U.S. filing of Muroyama, Applicants believe their claimed invention is patentable over the art made of record and thus is in *prima facie* condition for allowance. Withdrawal of the rejection under 35 USC 102(e) and allowance of claims 41 43, 44, and 46 (as amended), is respectfully requested.

In Section 6 of the Office Action, the Examiner rejected claim 42 under 35 USC 102(e) and alternatively under 35 USC 103(a) as being obvious over Muroyama et al. In particular, the Examiner states that the claim is a product by process claim and that the burden is on the Applicants to establish patentability. Applicants note that their specification on page 10 lines 28-32 states that the annealing process increases the emission current capability of the emitter as well as increasing device yields and quality by allowing the emitters to last longer. Clearly the annealing process has changed the structure of the emitter such as by at least decreasing the resistance of contacts of dissimilar metals to increase current flow. Applicants are required to only state how to make and use their invention and do not need to provide a theory of operation into how every step or combination of elements actually works. By demonstrating and describing the improved results, Applicants have established that the structure of their emitter is different from prior emitters that did not perform the annealing process. Accordingly, Applicants believe that they have met the initial burden. Applicants have performed additional testing and examination of the device and if required reserve the right to submit a 37 CFR 132 declaration to show additional physical changes. However, claim 42 depends from claim 41 and thus is believed patentable based at least on the patentability of claim 41, as amended. Withdrawal of the rejection under 35 USC 102(e) and alternatively 35 USC 103(a) is respectfully requested. Accordingly, claim 42 is believed to be in *prima facie* condition for allowance and such allowance is also respectfully requested.

In Section 7 of the Office Action, claim 45 was rejected under 35 USC 103(a) as being unpatentable over Muroyama et al in view of Raina et al. Claim 45 depends upon claim 41 and is believed patentable based at least on the patentability of claim 41, as amended, described above. Accordingly, claim 45 is

believed in *prima facie* condition for allowance. Withdrawal of the rejection under 35 USC 103(a) and allowance of claim 45 is respectfully requested.

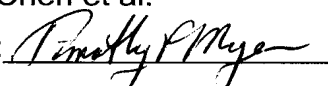
In Section 8 of the Office Action, claim 47 was rejected under 35 USC 103(a) as being unpatentable over Muroyama et al in view of Applicants' prior art. Claim 47 depends upon claim 41 and is believed patentable based at least on the patentability of claim 41, as amended, described above. Accordingly, claim 47 is believed in *prima facie* condition for allowance. Withdrawal of the rejection under 35 USC 103(a) and allowance of claim 47 is respectfully requested.

Applicants believe their claims as amended are patentable over the art of record, and that the amendments made herein are within the scope of a search properly conducted under the provisions of MPEP 904.02. Accordingly, claims 41-47 are deemed to be in *prima facie* condition for allowance, and such allowance is respectfully requested.

If for any reason the Examiner finds the Application other than in a condition for allowance, the Examiner is respectfully requested to call Applicants' undersigned representative at the number listed below to discuss the steps necessary for placing the application in condition for allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 08-2025. Should such fees be associated with an extension of time, Applicants respectfully request that this paper be considered a petition therefore.

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